LOT 1-2 CONCESSION 5 HOUGHTON

Site Number 002030

LOWER SIDE ROAD, HOUGHTON

3.5 km E of County Rd 28

Site Number:	002030
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	-		-				
Inventory Data:							
Structure Name	Lot 1-2 Conce	ession 5 Ho	ughton]
Main Hwy/Road #	LOWER SIDE	E ROAD	X On	Crossing Type:		Road Navig. W Other X Non-Navi	
Hwy/Road Name	LOWER SIDE	E ROAD, HO	DUGHTON]
Structure Location	3.5 km E of C	County Rd 2	8]
Latitude	42d 35' 58" N			Longitude 8	80d 37' 22.2" W]
Owner(s)	Norfolk Coun	ty		Heritage Z Designation:	X Not Cons. Cons./not App	List/not Design	. Desig. & List
MTO Region	30	Southwest	ern	Road Class:	Freeway	Arterial Collect	or X Local
MTO District	31	London / S	tratford	Posted Speed	80	No. of Lanes	2
Old County	20	Norfolk		AADT	69	% Trucks	
Geographic Twp.	1126	Houghton		Inspection Rout	e Sequence		
Structure Type	15	Rigid Fran	ne, Vertical Legs	Interchange Nur	mber		
Total Deck Length	14	(m)		Interchange Stru	ucture Number		
Overall Str. Width	14.8	(m)		Min. Vertical Cle	earance	3 (m)	
Total Deck Area	207.2	(m ²)		Special Route	Truck E	mergency X Schoo	Bicycle
Roadway Width	10	(m)		Detour Length	Around Bridge	6.5 (km)	
Skew Angle		(Degrees)		Direction of Stru	ucture	North / South	
No. of Spans	1]		Fill on Structure)	1 (m)	
Span Length	4.2					(m)	
Historical Data:							
Year Built		1999		Year of Last Ma	ajor Rehab.]
Last OSIM Inspect	tion	June 17, 20	014	Last Evaluation]
Last Enhanced OS	SIM Inspection			Current Load Lir	mit		(tonnes)
Enhanced Access (ladder, boat, lift, e				Load Limit By-L	aw #]
Last Underwater Ir	nspection			By-Law Expiry D	Date]
Last Condition Sur	rvey						
Rehab History:	(Date/descrip	tion)					

Field Inspection Information	on:			
Date of Inspection:	July 6, 2016	Type of Inspection:	X OSIM	Enhanced OSIM
Inspector:	Matt Alderson, G. Douglas Vallee Ltd.			
Others in Party:	N/A			
Access Equipment Used:	Hammer, Binoculars, Measuring Tape, C	amera, etc.		
Weather:	Sunny			
Temperature:	29 °C			

٨،	litional Investigation Required:		Priority	
Aut	inional investigation Required.	None	Normal	Urgent
Mat	erial Condition Survey			
Х	Detailed Deck Condition Survey:		Х	
Х	Non-destructive Delamination Survey of Asphalt-Covered Deck:	Х		
Х	Concrete Substructure Condition Survey:	Х		
Х	Detailed Coating Condition Survey:	Х		
Х	Detailed Timber Investigation	Х		
Х	Post-Tensioned Strand Investigation	Х		
Und	lerwater Investigation:	Х		
Fati	gue Investigation:	Х		
Seis	smic Investigation:	Х		
Stru	icture Evaluation:	Х		
Mor	nitoring			
Х	Monitoring of Deformations, Settlements and Movements:			X
Х	Monitoring Crack Widths:	Х		
Inve	estigation Notes:		•	
Mor	nitor erosion of road regularly. Cables loose on barrier. No hazard signs.			

Overall Structure Notes:			
Recommended Work on Structure:	None X Maintenance	Minor Rehab. Replace	
Timing of Recommended Work:	1 to 5 years	6 to 10 years	
Overall Comments:	Repair loose cables and road	l erosion, replace broken / rotten posts. Erosion control.	
Date of next Inspection:	July 6, 2018		

Suspected Performance Deficiencies Load carrying capacity

7	Bearing not uniformly loaded/unstable	
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- Excessive deformations (deflections & rotations) Continuing settlement
- 08 Pedestrian/vehicular hazard
 - 10
 - 11

Maintenance Needs

01

02

03

04

05

01 Lift and swing bridge maintenance

Continuing movements

02 Bridge cleaning

Seized bearings

- 03 Bridge handrail maintenance
- Painting steel bridge structures 04 05
- Bridge deck joint repair 06 Bridge bearing maintenance

- Jammed expansion joint
- 09
- Rough riding surface Deck drainage
- 07 Repair to structural steel Repair of bridge concrete
- 08 09 Repair of bridge timber
- 10 Bailey bridges - maintenance
- 11 Animal/pest control
- Bridge surface repair 12

- Slippery surfaces 12
- 13 Flooding/channel blockage
- 14 Undermining of foundation

Site Number: 002030

- 15 Unstable embankments 16
 - Other
- 13 Erosion control at bridges
- 14 Concrete sealing
- 15 Rout and seal Bridge deck drainage 16
- Scaling (Loose concrete or ACR steel) 17
- 18 Other

07

Site Number: 002030

Rehabilitatio	n Required:	Element		Prio	rity		Estimated Construction
Rehab	Replace		Urgent	Within 1 yr	1-5 yrs	6-10 yrs	Cost
		Wearing Surface (Approaches)					
		Railing System					\$20,000
		Barrels					
		Inlet Components					
		Outlet Components					
		Streams and Waterways					\$5,000
		Foundation (below ground level)					
	T			1			
	•		•	•		Total Cost	\$25,000

Associated Work:	Comments	Estimated Construction Cost
Additional Investigations		
Traffic Management		
Utilities		
Road Allowance		
Environmental Assessment		
Engineering		
Other		
Contingencies		
	Total Cost	\$0

Justification:		
Notes:	Construction Cost: Associated Work Cost:	\$25,000 \$0
	TOTAL Estimated Cost:	\$25,000

Approaches

Wearing Surface (Approaches)

1600

1601

Location:			Top of F	ill			Height:	
Material:		2	Asphalt				Count:	2
Element Type:							Total Quantity:	2 Each
Environment:			Severe				Limited Inspection:	
Protection Syste	em:	Unknown				Perform. Deficiencies		
Condition	Uni		Exc.	Good	Fair	Poor		-
Data:	Eac	ch	0	2	0	0		
Comments: Minor settlemen	t at stru	ucture e	edges.					
Recommende	ed Wor	rk:	Rehab	Rep	lace		Maintenance Needs:	
Timing:	Ur	gent	< 1yr	1-	5 yr 🗌 6 - 1	0 yr	Urgent 1 year	2 year
Element Group:		400	Barriers				Length:	93.6
Element Name:		402	Railing S	System			Width:	
Location:							Height:	
Material:			Steel Ca	ıble			Count:	2
Element Type:							Total Quantity:	187.2 m
Environment:			Severe				Limited Inspection:	
Protection Syste	em:		Unknow	n			Perform. Deficiencies	
Condition	Uni	its	Exc.	Good	Fair	Poor		
Data:	m	1	0	0	100	87.2		
Comments: Cables loose, or Recommende Timing:	ed Wor		rotted post Rehab	Rep	_		Many cracked and rotted post Maintenance Needs: Urgent 1 year	ts. Guiderail is overgrown. Bridge Railing System M. X 2 year
							-	
Element Group:		1200	Culverts				Length:	14.8
Element Name:		1203	Barrels				Width:	4.2
Location:			Inside				Height:	3
Material:		4	Cast-in-p	place Cond	crete		Count:	1
Element Type:							Total Quantity:	150.96 sq.m
Environment:			Moderat	e			Limited Inspection:	

Unknown

Rehab

< 1yr

Good

150.96

Replace

1 - 5 yr

Fair

0

Poor

0

Exc.

0

Protection System: Condition

Some staining at joints.

Recommended Work:

Timing:

Data:

Comments:

Units

sq.m

Urgent

Element Data Element Group:

Element Name:

	Maintenance Needs:		
6 - 10 yr	Urgent 1 year	2 year	
		G. Douglas Vallee Lin	nited
		Pa	ge 4

Perform. Deficiencies

Site Number: 002030

Bridge Railing System Mainte

Length:

Width:

Site	Number:	002030

Element D	Data
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Liement Data										
Element Group:	1200 Culverts						Length: 4.2			
Element Name:	1201 Inlet Components						Width: 0.3		0.3	
Location:		North				Н	eight:		3	
Material:	4	4 Cast-in-place Concrete					С	ount:		1
Element Type:							T	otal Quantity:		3.06 sq.m
Environment:	Moderate						Li	mited Inspec	tion:	
Protection System	:	Unknown					Ρ	erform. Defic	iencies	
Condition	Units	Exc.	Good	Fa		Poor				+
Data:	sq.m	0	2.86	0.	.2	0				
Comments: Minor deterioration on north fascia.										
Recommended	Work:	Rehab	Rep	lace]		Μ	laintenance N	leeds:	
Timing:	Urgent	< 1yr	7 1-	5 yr	6-1	I0 yr		Urgent	1 year	2 year
i i i i i i i i i i i i i i i i i i i	orgoni			<u></u>	Ŭ			orgoni	_ i you	
Element Group:	1200	Culverts						ength:		4.2
Element Name:	1202	Outlet Co	mponent	s			_	/idth:		0.3
Location:		South		-				eight:		3
Material:	4		lace Cond	crete			Count:			1
Element Type:		4 Cast-in-place Concrete					Total Quantity:			3.06 sq.m
Environment:		Moderate					Limited Inspection:			•
		Unknown						erform. Defic		
Protection System Condition	Units	Exc.	Good	Fa	air	Poor	F	enonn. Denc	lencies	
Data:	sq.m	0	3.06	(0				
Comments:										
Recommended	VVOrk:	Rehab	Rep	lace]		IV	laintenance N	veeds:	
Timing:	Urgent	< 1yr	1 -	5 yr	6 - 1	I0 yr		Urgent	1 year	2 year
	1400	E reche a re lur		4				e ie eith i		
Element Group: Element Name:		Embankn					_	ength:		
Location:						Width: Height:				
Material:		Earth/Native Material					Count: 1		1	
Element Type:			ive mater	iai			Total Quantity:			1 Each
Environment:							Limited Inspection:			
Protection System		None					Perform. Deficiencies			
Condition	Units	Exc.	Good	Fa	air	Poor	- -			
Data:	Each	0	0.5	C		0.5			Continuir	ng settlement
Comments: Banks stable. Erosion on northeast quadrant deteriorating road. Recommended Work: Rehab Replace Maintenance Needs: Erosion Control at Bridges										
Timing: Urgent < 1yr 1 - 5 yr 6 - 10 yr						Urgent	X 1 year	2 year		
,	-			·				¥	·	<u> </u>

Site	Number:	002030
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Element Data

Element Group:		1300 Foundations					Length:		
Element Name:		1301 Foundation (below ground level)					Width:		
Location:							Height:		
Material:							Count:		1
Element Type:							Total Quantity:		1 Each
Environment:							Limited Inspection:		х
Protection Syste	em:						Perform. Deficiencies		
Condition	-	Jnits	Exc.	Good	Fair	Poor			
Data:	E	ach	ch i i i i i i i i i i i i i i i i i i i						
Comments:									
Limited inspection									
Recommended Work: Rehab Replace			Maintenance Needs:						
Timing: Urgent < 1 yr 1 - 5 yr 6 - 10 yr Urgent 1 year 2 year									



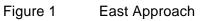




Figure 2 West Approach



Figure 3 North Profile











Figure 6 Downstream



Figure 7 Barrel, Looking South



Figure 8 Staining on Soffit



Figure 9 Minor Settlement at Structure Edges



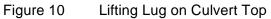




Figure 11 Loose Guiderail Cables